



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

October 13, 2017

Via Regular U.S. Mail

Robert A. Bilott, Esquire
Taft Stettinius & Hollister LLP
1717 Dixie Highway, Suite 910
Covington, Kentucky 41011-4704

RE: Response to July 31, 2017 Letter Regarding Perfluorochemical Issues

Dear Mr. Bilott:

I am in receipt of your letter dated July 31, 2017, regarding perfluorochemical drinking water issues at the Wright Patterson Air Force Base ("WPAFB") and questions regarding GenX. For ease of reference, I have divided this response into two sections, below, addressing each of the issues you raised.

WPAFB and PFOA/PFOS

As you know, there is no primary or secondary maximum contaminant level ("MCL") for Perfluoroalkyl Substances ("PFASs") in drinking water. USEPA has been evaluating PFASs through the Unregulated Contaminant Monitoring Rule, which is designed to collect data for contaminants suspected to be present in drinking water but that do not have health-based standards established. As part of this program, USEPA's goal is to determine the incidence of certain contaminants, health effects, treatment options and, ultimately, if the contaminant warrants regulation under the Safe Drinking Water Act. Based on preliminary information, USEPA, established a provisional level for PFOA and PFOS in 2009. USEPA indicates in its January 8, 2009 document entitled "*Provisional Health Advisories for Perfluorooctanoic Acid ("PFOA") and Perfluorooctane Sulfonate ("PFOS")*" that provisional levels are developed to provide information in response to a rapidly developing situation until such time as further studies can be done to better establish a health advisory level.

The first time Ohio EPA saw Unregulated Contaminant Monitoring Rule (UCMR) data results for WPAFB was in February 2016. You'll note that the e-mails attached as Exhibit B to your letter are between USEPA staff only until the one sent to Ohio EPA staff in February 2016. Ohio EPA was first notified of WPAFB PFAS results on February 8, 2016. See, attached February 22, 2016 correspondence. Ohio EPA joined USEPA in a meeting with WPAFB on February 9, 2016 to communicate Ohio EPA's concerns regarding the results and the need for additional investigation as to the source, as well as the need for sampling of the production wells themselves, since the UCMR sampling was done at the entry points only. Based upon Ohio

EPA's first review of the WPAFB data on February 8, 2016, Mike Baker initiated discussion with USEPA regarding the WPAFB results. (There was one sample at 210 ppt.) Mr. Baker's discussions with USEPA are memorialized in a series of e-mails from February 9 through February 11, 2016 (attached) and discussed in more detail below.

In summary, the e-mail discussion confirms that USEPA intended to take the lead on PFOA/PFOS strategies and use advisories and was considering a 1431 action with respect to WPAFB. USEPA confirmed it was considering a 1431 action in its February 9th e-mail, timestamped 12:15 PM. As Mr. Baker points out in his February 10th email, USEPA's Acting Regional Administrator Kaplan instructed Ohio EPA "not to take any action regarding Wright Patterson AFB and detection of PFOS under UCMR3 monitoring [due to the fact] U.S. EPA HQ is formulating a national approach to responding to PFOA and PFOS including use advisories." In a follow-up e-mail on February 11, USEPA confirmed that a follow up sample was taken at the WPAFB location where the 210 ppt result was obtained and the follow-up sample was 150 ppt, below the provisional health advisory level of 200 ppt. In that same e-mail, USEPA expressed an interest in additional sampling to ensure the decreasing trend continued. In response, Ohio EPA sent the following email on February 11:

"Thank you for confirming my prior observation that the exceedance to the PFOS provisional health advisory at 0.21 ppb occurred in October 2014 and a subsequent sample taken at the same location in April 2015 was at 0.15 ppb, which is below the provisional health advisory level of 0.20 ppb. I am not aware of any other sampling data. Ohio EPA expects that any further sampling of the WPAFB public water system for PFOS will be done by U.S. EPA or by WPAFB under the direction of U.S. EPA. Ohio EPA further expects that if future monitoring results show levels above the provisional short term health advisory level, or above any future advisory level if U.S. EPA decides to make any changes, that U.S. EPA will be immediately transparent in sharing that information with WPAFB and the users of their public water system."

In conclusion, the e-mails demonstrate USEPA's lead role and that Ohio EPA urged USEPA to implement a plan for WPAFB that included strategies for protection of Dayton's nearby drinking water wellfield.

There was a sampling event on March 16, 2016 at WPAFB and the results showed Well 8 to be as follows

	Well 8	Well 9
PFOS	90 ppt (.09 ppb)	390 ppt (.39 ppb)
PFOA	30 ppt (.03 ppb)	30 ppt (.03 ppb)

The only result above the provisional health advisory level was in Well 9 for PFOS. On April 4, 2016, WPAFB voluntarily took Well 9 offline due to the result above the provisional health advisory level. On April 19, 2016, there was another sampling event at WPAFB and the results showed that Well 8 levels of PFOS had increased to 120 ppt (still below the 200ppt provisional health advisory), and PFOA was below detection limits. Well 9 results showed an increase of both PFOA and PFOS but remained offline.

On May 18, 2016, after hearing that USEPA intended to lower the PFOA/PFOS health advisory numbers, Ohio EPA wrote a letter (attached) to USEPA regarding WPAFB. Ohio EPA again requested USEPA respond with a plan for WPAFB, including strategies for protecting Dayton's wellfield. This request was consistent with USEPA's directive to Ohio EPA to refrain from taking action because USEPA was developing a national approach. Ohio EPA expected this approach to be like that taken in the DuPont case, where USEPA was the lead agency, negotiating the original Consent Order and overseeing implementation and compliance.

On May 19, 2016, USEPA issued a lifetime drinking water health advisory level of 70 ppt for human exposure to PFOS/PFOA (individually and combined). This change meant that WPAFB's Well 8 exceeded the health advisory level for the first time. USEPA did not take action and did not immediately respond to Ohio EPA's May 18, 2016 letter. Therefore, on May 20, 2016, Ohio EPA notified WPAFB of the exceedance and required WPAFB to immediately address the issue by, inter alia, taking Well 8 offline, issue a drinking water advisory, and continue sampling remaining production wells monthly for PFOA/PFOS. WPAFB did not undertake these actions prior to May 25, 2016, which resulted in Ohio EPA issuing the attached Emergency Orders. These Orders were extended on August 23, 2016. A second extension was not necessary as WPAFB committed to continuing the necessary sampling.

Meanwhile, on June 2, 2016, Ohio EPA also alerted WPAFB to the need to perform an expedited removal action pursuant to the February 17, 1988 Administrative Orders on Consent between Ohio EPA and WPAFB. Please see the attached letter for details on what Ohio EPA was requiring as part of an expedited removal action. Ohio EPA met with WPAFB and the City of Dayton on June 15, 2016 to discuss next steps. Please see the June 20, 2016 letter, attached, summarizing the meeting.

On July 14, 2016, USEPA responded to Ohio EPA's May 18, 2016, letter with an indication it would work with Ohio EPA on WPAFB issues, but did not indicate it was going to take the lead at this site. See, attached. Ohio EPA continues to meet regularly with WPAFB and the City of Dayton to evaluate sampling results, future sampling needs, and contingency planning. Ohio EPA's goals are to continue to protect WPAFB water system users and to protect the City of Dayton's wellfield. To date, USEPA has not formally taken action regarding PFOA/PFOS at WPAFB.

Despite a lack of assistance or leadership from USEPA, Ohio EPA continues its efforts to get WPAFB to address PFOA/PFOS. On May 2, 2017, WPAFB's plans to install drinking water

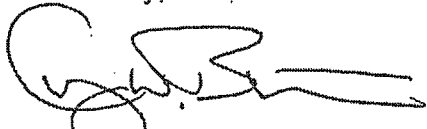
treatment for PFOA/PFOS in Wells 8 and 9 were approved. On June 2, 2017, the treatment system was installed.

Gen X

GenX is an emerging contaminant developed by companies concurrent with their efforts to phase out PFOA/PFOS in their emissions and products as part of USEPA's Stewardship Program. USEPA has not established any provisional or health advisory level for GenX. Additionally, there is limited analytical capability in terms of labs able to perform analysis to detect GenX in samples. In addition, there are data gaps regarding treatment capabilities. Ohio EPA will continue to monitor scientific developments around this emerging contaminant and strongly recommends USEPA research this contaminant further so it can establish a health advisory level for GenX.

In summary, USEPA repeatedly represented that it was taking the lead in Ohio on addressing any PFOA/PFOS issues as a result of its UCMR program. USEPA even advised Ohio EPA not to take action with respect to WPAFB PFOA/PFOS issues. However, as you can see, Ohio EPA took swift and protective action when it became apparent that USEPA was not going to act to address PFOA/PFOS at WPAFB. Ohio EPA will do everything it can to engage USEPA regarding GenX so that USEPA doesn't likewise shirk its responsibilities with respect to GenX the same way it did with PFOA/PFOS at WPAFB.

Sincerely,

A handwritten signature in black ink, appearing to read 'Craig W. Butler', with a stylized flourish at the end.

Craig W. Butler, Director
Ohio Environmental Protection Agency



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

February 22, 2016

Mr. Mike Brady
AFCEC/CZO
Building 112
1981 Monahan Way
Wright-Patterson AFB, Ohio 45433

Re: Wright-Patterson AFB, Fairborn
Notice of Violation (NOV)
Correspondence
Remedial Response
Greene County
529000856002

Subject: Notice of Violation for failure to submit a Preliminary Assessment for Perfluoroalkyl Substances at Wright-Patterson Air Force Base

Dear Mr. Brady:

Wright-Patterson Air Force Base (WPAFB) has failed to submit the Preliminary Assessment (PA) Document for Perfluoroalkyl Substances (PFASs) to the Ohio Environmental Protection Agency (Ohio EPA) in accordance with the February 17, 1988, Director's Final Findings and Orders (DFFOs) as prescribed in Section 3, Paragraphs B and C. The approved schedule in the DFFOs states that a PA shall be submitted to Ohio EPA, "within sixty (60) days of the discovery of any placement or disposal or threatened placement or disposal of Wastes, for which a PA was not completed pursuant to this Order." Based on the date of the finalized PA, the PA should have been submitted to Ohio EPA in September 2015.

On February 8, 2016, U.S. EPA informed Ohio EPA of detections of PFASs in distribution samples collected from WPAFB's potable water system. Ohio EPA joined U.S. EPA in communicating those concerns to WPAFB at a February 9, 2016 meeting. During the meeting, the PA was discussed and Treva Bashore, with WPAFB, mentioned that it was finalized in September 2015. This PA is significant as it presents Identified Areas (IAs) for PFAS releases at the Base. Since PFASs have been detected in the Base's potable water system, it is necessary that further investigative work be conducted, including a Site Inspection (SI), to evaluate the nature and extent of PFASs. In order to ensure that the SI phase is completed adequately to capture all IAs and Ohio EPA concerns, Ohio EPA will provide comments on the PA. We expect that those comments will then be incorporated into the PA and used for scoping of the SI. WPAFB should also reach out to the U.S. EPA and give them the opportunity to provide comments on the PA.

With respect to the DFFOs, Ohio EPA is disappointed that WPAFB did not include Ohio EPA in the PA phase for investigating PFASs at the Base. Had WPAFB sought our concurrence on the PA (and approval from U.S. EPA), additional IAs would likely have been identified, such as a September 7, 2011 release at Building 206, that was reported

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Mr. Mike Brady
February 22, 2016
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to Ohio EPA's spill hotline. Ohio EPA expects involvement in future activities concerning PFASs at WPAFB, including scoping and work activities. Furthermore, Ohio EPA expects to be involved in decisions concerning any investigative activities and monitoring of contaminants (specifically PFASs) upgradient of the city of Dayton's wellfields. Inclusion of Ohio EPA in the PA and SI review process will benefit WPAFB's environmental restoration efforts in both the short and long term.

WPAFB will remain in violation of the DFFOs until Ohio EPA has been given the opportunity to review, comment, and concur with the September 2015 PA. In accordance with Section 14, Paragraph A, of the DFFOs, Ohio EPA reserves the right to seek legal and/or equitable relief to enforce the terms and conditions of the Orders. Ohio EPA plans to provide comments on the PA within thirty (30) days and expects the PA to be amended to address those comments within fourteen (14) days; otherwise, Ohio EPA may take action to enforce the terms of the DFFOs, subject, of course, to applicable dispute resolution procedures.

If you have any questions, you may contact me at (937) 269-5383.

Sincerely,



W. Dwayne Gross
Site Coordinator
Division of Environmental Response and Revitalization

cc: Pete Whitehouse, Chief, Ohio EPA/DERR
Mark Navarre, Ohio EPA/Legal
Bonnie Buthker, District Chief, Ohio EPA/SWDO
Justin Burke, Federal Facilities Coordinator, Ohio EPA/DERR
Randall Kirkland, Supervisor, Ohio EPA/SWDO
David Seely, US EPA
Catherine Fairlie, USAF

WDG/ls

From: Baker, Michael
Sent: Thursday, February 11, 2016 12:07 PM
To: Shoven, Heather <shoven.heather@epa.gov>
Cc: Poy, Thomas <poy.thomas@epa.gov>; Messer, Elizabeth <Beth.Messer@epa.ohio.gov>
Subject: RE: EPA Deliberative- Enforcement Confidential: PFOS levels at Wright-Patterson AFB Area A/C (OH2903412)

Heather:

Thank you for confirming my prior observation that the exceedance to the PFOS provisional health advisory at 0.21 ppb occurred in October 2014 and a subsequent sample taken at the same location in April 2015 was at 0.15 ppb, which is below the provisional health advisory level of 0.20 ppb. I am not aware of any other sampling data. Ohio EPA expects that any further sampling of the WPAFB public water system for PFOS will be by done by U.S. EPA or by WPAFB under the direction of U.S.EPA. Ohio EPA further expects that if future monitoring results show levels above the provisional short term health advisory level, or above any future advisory level if U.S. EPA decides to make any changes, that U.S.EPA will be immediately transparent in sharing that information with WPAFB and the users of their public water system.

Thanks,
Mike

Michael G. Baker, Chief
Division of Drinking and Ground Waters
Ohio Environmental Protection Agency
Lazarus Government Center,
PO Box 1049
Columbus, Ohio 43216-1049
E-mail: Michael.Baker@epa.ohio.gov
Office: 614-644-2752



From: Shoven, Heather [mailto:shoven.heather@epa.gov]

Sent: Thursday, February 11, 2016 9:45 AM

To: Baker, Michael

Cc: Poy, Thomas

Subject: RE: EPA Deliberative- Enforcement Confidential: PFOS levels at Wright-Patterson AFB Area A/C (OH2903412)

Good Morning Mike,

Thank you for your email. Tom Poy will be following up with you by phone today.

We have better organized the UCMR 3 data for Wright-Patterson AFB Area A/C (OH2903412) in the table below so that you can see how the levels were at each entry point to the distribution system in both October 2014 and April 2015. As you had noted, the exceedance to the PFOS provisional health advisory at 0.21 ppb occurred in October 2014 and a subsequent sample taken at the same point in April 2015 was at 0.15 ppb, which is below the provisional health advisory level of 0.20 ppb. We would support more data being collected at Wright Patterson to see if the declining trend holds.

Agency ID	Facility Name	Facility Type	Ground Water	Entry Point	Entry Point to the Distribution System (EPTDS) from STU	Entry Point	Assessment Monitoring	Oct, 2014 (PFOS: 10/7/14, 210 ppt)	Apr, 2015 (PFOS: 4/8/15, 150 ppt)
54601	Building 10855 - STU 1	Treatment Plant	Ground Water	EP001	Entry Point to the Distribution System (EPTDS) from STU 1	Entry Point	Assessment Monitoring	Oct, 2014 (PFOS: 10/7/14, 210 ppt)	Apr, 2015 (PFOS: 4/8/15, 150 ppt)
60516	Building 31229 - STU 3	Treatment Plant	Ground Water	EP003	Entry Point to the Distribution System (EPTDS) from STU 3	Entry Point	Assessment Monitoring	Oct, 2014 (PFOS: 10/7/14, <0.04 ppt)	Apr, 2015 (PFOS: 4/8/15, 160 ppt)
60517	Building 10857 - STU 4	Treatment Plant	Ground Water	EP004	Entry Point to the Distribution System (EPTDS) from STU 4	Entry Point	Assessment Monitoring	Oct, 2014 (PFOS: 10/7/14, <0.04 ppt)	Apr, 2015 (PFOS: 4/8/15, 160 ppt)
60518	Building 30172 - STU 2	Treatment Plant	Ground Water	EP002	Entry Point to the Distribution System (EPTDS) from STU 2	Entry Point	Assessment Monitoring	Oct, 2014 (PFOS: 10/7/14, <0.04 ppt)	Apr, 2015 (PFOS: 4/8/15, <0.04 ppt)

Best wishes,
Heather

Heather A. Shoven | Enforcement Team Leader | U.S. Environmental Protection Agency, Region 5
Ground Water and Drinking Water Branch | 77 W. Jackson Blvd (WG-15J) | Chicago, IL 60604 | 312-886-0153

From: Mike.Baker@epa.ohio.gov [mailto:Mike.Baker@epa.ohio.gov]

Sent: Wednesday, February 10, 2016 5:44 PM

To: Shoven, Heather <shoven.heather@epa.gov>

Subject: RE: EPA Deliberative- Enforcement Confidential: Ohio Updates on Numbers of Public and Private wells impacted by PFOS and PFOA Lifetime Health Advisory Levels of 100 parts per trillion

Please let me know when you receive further instructions confirming Ohio is not expected to take any actions.

From: Shoven, Heather [mailto:shoven.heather@epa.gov]

Sent: Wednesday, February 10, 2016 3:37 PM

To: Baker, Michael

Subject: RE: EPA Deliberative- Enforcement Confidential: Ohio Updates on Numbers of Public and Private wells impacted by PFOS and PFOA Lifetime Health Advisory Levels of 100 parts per trillion

Thanks Mike. I appreciate the heads up.

Best wishes,
Heather

Heather A. Shoven | Enforcement Team Leader | U.S. Environmental Protection Agency, Region 5
Ground Water and Drinking Water Branch | 77 W. Jackson Blvd (WG-15J) | Chicago, IL 60604 | 312-886-0153

From: Mike.Baker@epa.ohio.gov [mailto:Mike.Baker@epa.ohio.gov]

Sent: Wednesday, February 10, 2016 2:29 PM

To: Shoven, Heather <shoven.heather@epa.gov>

Cc: Poy, Thomas <poy.thomas@epa.gov>; Craig.Butler@epa.ohio.gov; Kaplan, Robert <kaplan.robert@epa.gov>

Subject: RE: EPA Deliberative- Enforcement Confidential: Ohio Updates on Numbers of Public and Private wells impacted by PFOS and PFOA Lifetime Health Advisory Levels of 100 parts per trillion

Heather:

Acting Regional Administrator Kaplan and Director Butler spoke this afternoon on this issue and we have been instructed to not take any action regarding Wright Patterson AFB and detection of PFOS under UCMR3 monitoring. We understand that U.S.EPA HQ is formulating a national approach to responding to PFOA and PFOS including use advisories. You should be receiving further instructions on how to proceed with Wright Patterson from Mr. Kaplan.

Michael G. Baker, Chief
Division of Drinking and Ground Waters
Ohio Environmental Protection Agency
Lazarus Government Center,
PO Box 1049
Columbus, Ohio 43216-1049
E-mail: Michael.Baker@epa.ohio.gov
Office: 614-644-2752



From: Shoven, Heather [mailto:shoven.heather@epa.gov]
Sent: Wednesday, February 10, 2016 8:50 AM
To: Baker, Michael; Kelleher, Todd
Cc: Drake, Wendy; Wilson, Jennifer; Poy, Thomas; Harris, Kimberly; Buthker, Bonnie; Davidson, Jeff
Subject: RE: EPA Deliberative- Enforcement Confidential: Ohio Updates on Numbers of Public and Private wells impacted by PFOS and PFOA Lifetime Health Advisory Levels of 100 parts per trillion

Good morning Mike and Todd,

I am following up with public education materials that we have obtained from our colleagues in EPA Region 3 as well as from other state websites.

Attached are two Microsoft Publisher factsheets developed by Region 3 community involvement coordinators for active sites where the Agency has issued emergency consent orders to address PFOS contamination -- Dover AFB and Warminster/Willow Grove. If you decide to use one of these templates please check the weblinks to ensure they are still valid.

We also found the following two state websites that have helpful information --

<http://dhss.alaska.gov/dph/Epi/Documents/01-Internal/eh/PFOSFactSheet.pdf>

<http://www.mass.gov/eea/docs/dep/water/drinking/standards/pfos-fs.pdf>

Please let us know how you plan to proceed. We want to make sure that folks served by Wright-Patterson AFB Area A/C PWS (OH2903412) are aware of the UCMR 3 sampling results for PFOS.

Best wishes,
Heather

Heather A. Shoven | Enforcement Team Leader | U.S. Environmental Protection Agency, Region 5
Ground Water and Drinking Water Branch | 77 W. Jackson Blvd (WG-15J) | Chicago, IL 60604 | 312-886-0153

From: Shoven, Heather
Sent: Tuesday, February 09, 2016 12:15 PM
To: 'Mike.Baker@epa.ohio.gov' <Mike.Baker@epa.ohio.gov>; Todd.Kelleher@epa.ohio.gov
Cc: Drake, Wendy <drake.wendy@epa.gov>; Wilson, Jennifer <wilson.jenniferA@epa.gov>; Poy, Thomas <poy.thomas@epa.gov>; Harris, Kimberly <harris.kimberly@epa.gov>; Bonnie.Buthker@epa.ohio.gov; Jeff.Davidson@epa.ohio.gov
Subject: RE: EPA Deliberative- Enforcement Confidential: Ohio Updates on Numbers of Public and Private wells impacted by PFOS and PFOA Lifetime Health Advisory Levels of 100 parts per trillion

Thanks Mike. The Region is considering a 1431 action given that the levels are above the proposed lifetime health advisory level of 100 parts per trillion. However, any possible 1431 action would be discussed with Ohio EPA. The main goal is to get the word out to consumers and find alternative sources of water. That can be achieved in any number of ways and we need to discuss the best option.

Best wishes,
Heather

Heather A. Shoven | Enforcement Team Leader | U.S. Environmental Protection Agency, Region 5
Ground Water and Drinking Water Branch | 77 W. Jackson Blvd (WG-15J) | Chicago, IL 60604 | 312-886-0153

From: Mike.Baker@epa.ohio.gov [mailto:Mike.Baker@epa.ohio.gov]

Sent: Tuesday, February 09, 2016 12:05 PM

To: Shoven, Heather <shoven.heather@epa.gov>; Todd.Kelleher@epa.ohio.gov

Cc: Drake, Wendy <drake.wendy@epa.gov>; Wilson, Jennifer <wilson.jenniferA@epa.gov>; Poy, Thomas <poy.thomas@epa.gov>; Harris, Kimberly <harris.kimberly@epa.gov>; Bonnie.Buthker@epa.ohio.gov; Jeff.Davidson@epa.ohio.gov

Subject: RE: EPA Deliberative- Enforcement Confidential: Ohio Updates on Numbers of Public and Private wells impacted by PFOS and PFOA Lifetime Health Advisory Levels of 100 parts per trillion

Thanks. Some difference in results verses what we are seeing in Ohio. Also note there is a subsequent sample after the .21 result at the same location at .15ug/l. So the Region is considering a 1431 action?

From: Shoven, Heather [mailto:shoven.heather@epa.gov]

Sent: Tuesday, February 09, 2016 12:58 PM

To: Baker, Michael; Kelleher, Todd

Cc: Drake, Wendy; Wilson, Jennifer; Poy, Thomas; Harris, Kimberly; Buthker, Bonnie; Davidson, Jeff

Subject: RE: EPA Deliberative- Enforcement Confidential: Ohio Updates on Numbers of Public and Private wells impacted by PFOS and PFOA Lifetime Health Advisory Levels of 100 parts per trillion

Hi Mike,

I found the following information in an EPA letter to the Mayor of Hoosick Falls. The levels at the PWS were above the current provisional health advisory level of 0.4 ppb --<http://www.epa.gov/sites/production/files/2015-12/documents/hoosickfallsmayorpfoa.pdf>

"Four samples collected from the public water supply in Hoosick Falls on June 4, 2015 were found to contain more than 600 ppt of PFOA. Additionally, 2015 groundwater sampling at the Saint-Gobain Performance Plastics facility on McCaffrey Street in Hoosick Falls found levels as high as 18,000 ppt. Certain private wells in the area have also shown the presence of PFOA, though not at levels above 400 ppt, as far as EPA is aware. Based on the presence of PFOA above 400 ppt in Hoosick Falls public drinking water supply wells, it is recommended that an alternate drinking water source (e.g., bottled water) be provided to the users of the Hoosick Falls public water supply, until such time as PFOA concentrations in drinking water are brought consistently below the 400 ppt level. EPA also recommends that during this period, drinking water from the public water supply not be used for cooking (e.g., boiling pasta, making soup, steaming vegetables, etc.)."

Best wishes,
Heather

Heather A. Shoven | Enforcement Team Leader | U.S. Environmental Protection Agency, Region 5
Ground Water and Drinking Water Branch | 77 W. Jackson Blvd (WG-15J) | Chicago, IL 60604 | 312-886-0153

From: Mike.Baker@epa.ohio.gov [mailto:Mike.Baker@epa.ohio.gov]

Sent: Tuesday, February 09, 2016 11:50 AM

To: Shoven, Heather <shoven.heather@epa.gov>; Todd.Kelleher@epa.ohio.gov

Cc: Drake, Wendy <drake.wendy@epa.gov>; Wilson, Jennifer <wilson.jenniferA@epa.gov>; Poy, Thomas <poy.thomas@epa.gov>; Harris, Kimberly <harris.kimberly@epa.gov>; Bonnie.Buthker@epa.ohio.gov; Jeff.Davidson@epa.ohio.gov

Subject: RE: EPA Deliberative- Enforcement Confidential: Ohio Updates on Numbers of Public and Private wells impacted by PFOS and PFOA Lifetime Health Advisory Levels of 100 parts per trillion

What were the levels in Hoosick Falls?

Seems like they much have been much higher than the anticipated "lifetime" advisory level if they are recommending alternative water?

From: Shoven, Heather [mailto:shoven.heather@epa.gov]

Sent: Tuesday, February 09, 2016 12:45 PM

To: Kelleher, Todd; Baker, Michael

Cc: Drake, Wendy; Wilson, Jennifer; Poy, Thomas; Harris, Kimberly

Subject: EPA Deliberative- Enforcement Confidential: Ohio Updates on Numbers of Public and Private wells impacted by PFOS and PFOA Lifetime Health Advisory Levels of 100 parts per trillion

EPA DELIBERATIVE ENFORCEMENT CONFIDENTIAL

Hi Todd and Mike,

Thank you for your timely calls regarding the UCMR detects for PFOS at Wright Patterson AFB (OH2903412). As discussed with Todd, there has been a great deal of activity in regards to PFCs due to Region 2's recent Do Not Drink Order in Hoosick Falls, NY.

Here is the Health Advisory issued by Region 2 –<http://www.epa.gov/aboutepa/hoosick-falls-water-contamination>

EPA Statement on Private Wells in The Town of Hoosick and Village of Hoosick Falls, NY - January 28, 2016

"The EPA is developing a lifetime health advisory level for PFOA. While this work continues, the EPA recommends that people in the Town of Hoosick and the Village of Hoosick Falls who have private wells at which PFOA has been found to be present at a level greater than 100 parts per trillion not use that water for drinking or cooking, and instead take advantage of the free bottled water that is being made available at the Tops Market in Hoosick Falls. In addition, the EPA recommends that people in the Town of Hoosick and the Village of Hoosick Falls who have private wells that have not yet been tested for the presence of PFOA ask the New York State Department of Health to test their well and, in the meantime, take advantage of the bottled water available at the Tops Market in Hoosick Falls."

PFOA and PFOS Background and Recent Data

- Provisional Health Advisory Level for PFOA = 0.40 ppb → Lifetime Health Advisory Level may be 100 ppt
*Note=Current 2009 emergency order on consent with DuPont uses the provisional health advisory level as the action trigger.
- Provisional Health Advisory Level for PFOS = 0.20 ppb → Lifetime Health Advisory Level may be 100 ppt

We have analyzed the following data in light of the forthcoming release of lifetime health advisory levels for PFOA and PFOS by OW (anticipated in late March 2016):

1. **UCMR 3 Data** pulled as of October 2015 covering monitoring that occurred between 1/1/2013 and 9/30/2015.
NOTE: The UCMR 3 required all large systems (serving larger than 10,000 people) and a subset of systems serving less than 10,000 people to monitor for both PFOA and PFOS, along with other contaminants) at the entry point to the distribution system (post treatment=finished water).
2. **2009 DuPont Order Private Well Data** (Ohio only, Progress Report #37 dated 12/21/2015)
3. **2009 DuPont Order Public Water System Data** (Ohio only, Progress Report #37 dated 12/21/2015)

The shift from the provisional health advisory levels to a 100 ppt lifetime health advisory level for each contaminant triggers the need for action based on both UCMR 3 and DuPont data.

(1) UCMR 3 Data

PFOA: There were no PWSs above the draft PFOA trigger level of 100 ppt in this dataset.

PFOS: Wright-Patterson AFB Area A/C (OH2903412) has UCMR 3 results that exceed the provisional health advisory level of 0.20 ppb. Wright Patterson has a result of 0.21 ppb (see data tables below). Region 5 is contemplating an emergency order on consent and

(2) 2009 DuPont Order Private Well Data (Ohio and PFOA only)

PFOA: If the PFOA value is 100 ppt, an additional 15 homes in Ohio (and 5 homes in WV) will require alternate water and treatment. These homes have levels below the current provisional health advisory level of 0.40 ppb.

(3) 2009 DuPont Order Public Water System Data (Ohio and PFOA only)

PFOA: There are four PWSs in Ohio that are sampled as part of the 2009 Order. Belpre Public Works has November 2015 data for PFOA above 100 ppt in the finished water. The other three PWSs have levels well below 100 ppt after treatment.

I will keep you posted on Region 5's next steps. We will keep Ohio EPA apprised. Tom Poy has me following up with Region 3 to see if they have any public education material on PFOS that we can use with Wright Patterson. Please let me know if you have any questions or need further information.

Best wishes,
Heather

Heather A. Shoven | Enforcement Team Leader | U.S. Environmental Protection Agency, Region 5
Ground Water and Drinking Water Branch | 77 W. Jackson Blvd (WG-15J) | Chicago, IL 60604 | 312-886-0153

(PLEASE NOTE: UNITS NOTED BELOW ARE LISTED IN PPB)

State	PWS Name	Location	Sample Type	Sample Date
IL1770200	Freeport	Filter Plant	GW	EPTDS from Fil
IN5245011	Dyer Water Department	Highlands Intertie	SW	EP @ Connecti
MI0000220	Ann Arbor	Treatment Plant	MX	Treatment Plai
MI0005370	Plainfield Township	Treatment Plant	GU	Treatment Plai
MI0005370	Plainfield Township	Treatment Plant	GU	Treatment Plai
MN1040002	Bemidji	Combined Discharge	GW	Combined Disc
MN1820016	Oakdale	Well #1	GW	Well #1 Entry P
MN1820016	Oakdale	Well #1	GW	Well #1 Entry P
MN1820016	Oakdale	Well #2	GW	Well #2 Entry P
MN1820016	Oakdale	Well #2	GW	Well #2 Entry P
OH0200811	Lima City Water	Lima WTP	SW	EPTDS from W
OH2903412	Wright-Patterson AFB Area A/C	Building 10855 - STU 1	GW	EPTDS from ST
OH2903412	Wright-Patterson AFB Area A/C	Building 31229 - STU 3	GW	EPTDS from ST
OH2903412	Wright-Patterson AFB Area A/C	Building 10857 - STU 4	GW	EPTDS from ST
OH5701315	Montgomery County Water Services #1	STU 1	SW	DM-1 2000 Car
OH5701503	Montgomery County Water Services #2	Dayton Water Intertie	SW	4501 Wolf Roa
WI6320309	La Crosse Waterworks	Well 23	GW	Well 23 EPTDS
WI6320309	La Crosse Waterworks	Well 23	GW	Well 23 EPTDS

ISD ID	NAME	TYPE	DATE
MN1820016	Oakdale	GW	1/5/2015
MN1820016	Oakdale	GW	7/14/2015
OH2903412	Wright-Patterson AFB Area A/C	GW	10/7/2014

Wright-Patterson AFB's 2014 CCR is here: <http://www.wpafb.af.mil/shared/media/document/AFD-150430-030.pdf>. **No mention of PFOS detections.**

As promised, above are the PFC data for Wright-Patterson AFB. I checked the dataset for Dayton and they monitoring for all of the PFCs but had no detections. For 1,4-dioxane, Dayton did have three hits above the MRL (.086 ppb, .214 ppb, and .244 ppb) and one result above our reference range of .35-35 ppb (that result was .93 ppb). I was surprised to see that Wright-Patterson had all non-detects for 1,4-dioxane.



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

May 18, 2016

Re: General Correspondence
Drinking Water Program

Peter Grevatt
U.S. EPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue NW (4601M)
Washington, DC 20460

Dear Mr. Grevatt:

Ohio is home to one of the first experiences with perfluorooctanoic acid (PFOA) with the E. I. du Pont de Nemours and Co. (DuPont) Washington Works facility in Parkersburg, West Virginia, that at least in part, triggered the first provisional health advisory (HA). Ground water studies in nearby counties in Ohio resulted in U.S. EPA's settlement with DuPont in 2009 that included treatment of public and private drinking water sources to meet the established HA.

It is evident that U.S. EPA intends to issue a new HA for PFOA, as well as for PFOS, soon and I want to clearly articulate Ohio's expectations relative to implementing the new HA in our state. Upon issuance of a new HA levels, I expect U.S. EPA to lead any efforts to amend the 2009 consent order U.S. EPA signed with E.I. du Pont de Nemours and Co. as U.S. EPA negotiated the original order and oversaw its implementation and compliance.

Additionally, recently Ohio learned U.S. EPA detected PFOS at Wright Patterson Air Force Base as part of its UCMR 4C sampling actions. Upon learning of this, Ohio EPA requested U.S. EPA to implement a plan for Wright Patterson Air Force Base which includes strategies for protecting Dayton's nearby drinking water wellfield. Ohio is still awaiting your response.

As U.S. EPA prepares to release a new HAs, Ohio expects U.S. EPA to implement mitigation strategies for sites such as these, including identifying laboratory capacity which does not exist and is very limited nationally and developing advisory language. Ohio EPA anticipates all responses to exceedance of the new HA to be similar U.S. EPA response to the DuPont settlement.

We look forward to your action plan for known and potential PFOA/PFOS sites. Ohio can assist U.S. EPA in identifying potential sites for its response.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig W. Butler", is written over a horizontal line.

Craig W. Butler
Director

50 West Town Street • Suite 700 • P.O. Box 1049 • Columbus, OH 43216-1049
epa.ohio.gov • (614) 644-3020 • (614) 644-3184 (fax)



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

May 20, 2016

Colonel John M. Devillier
Base Commander
88 ABW/CC
Suite 223
5135 Pearson Road
WPAFB, OH 45433

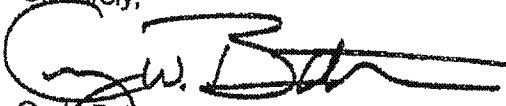
Dear Colonel Devillier:

On May 19, 2016, U.S.EPA issued new lifetime health advisories for PFOA and PFOS in drinking water. Unfortunately, according to the April 19, 2016 data from Wright-Patterson Air Force Base Area A/C water distribution system, the Area A/C drinking water contains levels above this new advisory number of 70 parts per trillion.

Therefore, Ohio EPA requires WPAFB to immediately take the following actions:

1. According to the March 16, 2016 sampling results, raw water in wells 8 and 9 are both impacted by PFOA and PFOS above the 70 ppt health advisory level. Since Well 9 is currently off-line, well 8 should also be immediately taken off-line. After both wells are off-line for 2 weeks, remaining production wells and the entry point to the Area A/C distribution system should then be sampled to determine if PFOA and PFOS contamination has been reduced to levels below 70 ppt. If the Area A/C distribution system still has PFOA and PFOS detections above the 70 ppt. health advisory level, WPAFB should continue to sample monthly until these contaminants are detected below the health advisory level.
2. WPAFB should immediately issue the attached drinking water advisory and offer an alternative source of drinking water for pregnant/lactating women and bottle fed infants using the drinking water from Area A/C. WPAFB should offer bottled water to these populations until the PFOA and PFOS levels in the Area A/C system are below the health advisory level of 70 ppt. Please provide Ohio EPA a copy of the final advisory.
3. Since the source of PFOA/PFOS in wells 8 and 9 has not been determined, WPAFB should continue to sample the remaining production wells that serve the Area A/C system monthly to ensure that they have not become contaminated with PFOA/PFOS.

Sincerely,



Craig Butler
Director

50 West Town Street • Suite 700 • P.O. Box 1049 • Columbus, OH 43216-1049
epa.ohio.gov • (614) 644-3020 • (614) 644-3184 (fax)



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

Colonel John M. Devillier
Base Commander
88 ABW/CC
Suite 223
5135 Pearson Road
WPAFB, Ohio 45433

RE: WRIGHT PATTERSON AFB AREA A
DFFO
DRINKING WATER PROGRAM
GREENE COUNTY
PWS ID # OH2903412

Issuance Date: May 25, 2016
Effective Date: May 25, 2016

CERTIFIED MAIL

91 7108 2133 3937 1502 7237

**Subject: Emergency Order Effective Immediately pursuant to ORC 6109.05(B) and
OAC 3745-47-19**

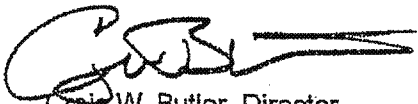
Dear Mr. Devillier:

As you know, the U.S. EPA recently announced a new health advisory standard of 70 parts per trillion for the contaminants Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA). Drinking water in the Area A Public Water System at Wright Patterson Air Force Base (WPAFB) is in excess of this new standard. On May 20, 2016 I sent a letter that included a list of actions WPAFB was required to undertake, including removing Well 8 from service, as a result of the continued presence of PFOA and PFOS contamination.

As of the date of this Emergency Order, WPAFB has not removed Well 8 from service, and because of this, cannot complete the remaining required actions, including the required sampling, as set forth in my May 20, 2016 letter. Due to this failure I have determined that a water supply emergency exists and that immediate action is required to protect public health and welfare. Accordingly, I am issuing the enclosed emergency order in accordance with ORC 6109.05(B). This order will remain in effect for 90 days, unless the director extends the effectiveness of the order for additional periods in accordance with ORC 6109.05(B).

In accordance with ORC 6109.05(B) and OAC 3745-47-19, you may request a hearing within ten days after receipt of this order. If a hearing is requested in accordance with ORC 6109.05(B) and OAC 3745-47-19, the hearing will be held within forty-eight hours to consider the issues raised within the hearing request. If additional time is needed to obtain and present evidence, the hearing examiner may continue the adjudication hearing, but shall reconvene the adjudication hearing as soon as possible and not later than 20 days. At an adjudication hearing you may appear in person, or be represented by your attorney, or by such representative as is permitted to practice before this Agency, or you may present your position, arguments, or contentions in writing. At the hearing you may present evidence and examine witnesses appearing against you. The request for a hearing shall be in writing and shall specify the issues of fact and law to be contested. Requests for a hearing shall be submitted in writing to the Hearing Clerk, Ohio EPA, P.O. Box 1049, Columbus, Ohio 43216-1049.

Sincerely,



Craig W. Butler, Director
Ohio Environmental Protection Agency

Attachments: May 25, 2016 Emergency Orders

cc: Lt. Colonel Polly Sandness, USAF
Colonel Oberg, USAF
Kimberly McSparran, Drinking Water Program Manager, WPAFB
Thomas Menza, Chief – Contracts and Environmental Law, WPAFB
Michael Baker, Chief, DDAGW
Cynthia Hafner, Deputy Director, Legal
Bonnie Buthker, Chief, SWDO

ec: Justin Burke, Manager, DDAGW-CO
Jeff Davidson, Manager, DDAGW-SWDO
Jeff Stark, DOCC, DDAGW-SWDO
Andrew Barienbrock, Supervisor, DDAGW-CO
Colin Bennett, Ohio EPA, Office of Legal Services
Lawrence Helkowski, Attorney General's Office

OHIO E.P.A.

Effective Date MAY 25 2016

MAY 25 2016

ENTERED DIRECTOR'S JOURNAL

BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:

Wright-Patterson AFB
88ABW/CE01UA
1450 Littrell Road
Wright Patterson AFB, OH 45433

Respondent,

DIRECTOR'S
EMERGENCY ORDERS

I certify this to be a true and accurate copy of the
official documents as filed in the records of the Ohio
Environmental Protection Agency.

I. JURISDICTION

By: Tim Gassler Date: 5-25-16

These Emergency Orders (Orders) are issued to the Wright-Patterson Air Force Base (Respondent) pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency (Ohio EPA) under Ohio Revised Code (ORC) § 6109.05(B) and Ohio Administrative Code (OAC) Rule 3745-47-19.

II. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapter 6109 and the rules promulgated there under.

III. FINDINGS

The Director of Ohio EPA (Director) has determined the following findings:

1. Respondent owns and operates a "public water system" (PWS), which is also a "community water system" as defined by ORC § 6109.01 and Ohio Administrative Code (OAC) Rule 3745-81-01.
2. Respondent's PWS (PWS ID# OH2903412) is located at 1450 Littrell Road, Wright Patterson AFB (Greene County), Ohio, 45433.
3. Respondent's PWS obtains its drinking water from a "ground water source" as defined by OAC Rule 3745-81-01. The Wright Patterson AFB Area A public water system (Area A PWS) is served by Wells 1, 2, 3, 7, 8, and 9 and serves a population of approximately 16,551 persons.

4. On March 16, 2016, Respondent sampled all of the Area A PWS production wells. Perfluorooctanesulfonic acid (PFOS) was detected in samples collected from Well 9 at concentrations of 390 parts per trillion (ppt) and in samples collected from Well 8 at 90 ppt. Well 9 also had concentrations of Perfluorooctanoic acid (PFOA) at 30 ppt.
5. On April 4, 2016, Respondent took Well 9 out of service since Well 9 had concentrations of PFOS of 360 ppt, above the previous United States Environmental Protection Agency (US EPA) short term health advisory of 200 ppt.
6. On April 19, 2016, Respondent resampled production Wells 8 and 9. PFOS was detected in Well 9 at concentrations of 620 ppt and in Well 8 at 120 ppt. PFOA was also detected in Well 9 at concentrations of 50 ppt.
7. On May 19, 2016, the US EPA issued a lifetime drinking water health advisory level of 70 ppt (individually and combined) for human exposure to PFOA and PFOS.
8. The presence of PFOA and PFOS in Wells 8 and 9 in excess of the US EPA health advisory number is a continued threat to the public health or welfare.
9. On May 20, 2016, the Director issued a letter to Respondent requiring Respondent to take the following actions:
 - a. Take Well 8 offline and leave Well 9 offline. Once Well 8 and Well 9 are offline for two weeks, sample the remaining production wells and the entry point to the distribution system for the Area A PWS to determine if PFOA and PFOS contamination has been reduced to levels below the 70 ppt health advisory level. If the Area A PWS distribution system still has PFOA and PFOS detections above the 70 ppt health advisory level, continue to sample monthly until these contaminants are detected below the health advisory level.
 - b. Immediately issue the drinking water advisory and offer an alternative source of drinking water for pregnant/lactating women and bottled fed infants using the drinking water from the Area A PWS. Offer bottled water to these populations until the PFOA and PFOS levels in the Area A PWS are below the health advisory level of 70 ppt. Provide Ohio EPA a copy of the final advisory.
 - c. Continue to sample the active production wells that service the Area A PWS monthly to ensure that they have not become contaminated with PFOA/PFOS.
10. As of May 25, 2016, Well 8 has not been taken offline and continues to provide

water for the Area A PWS. In addition, Respondent has not provided the Director with any updated sampling results of the concentrations of PFOA and PFOS in the Area A PWS.

11. Since the May 20, 2016 letter was issued, Respondent has not responded to phone calls or emails in a timely manner, and has not provided contact information for an individual with the authority to make decisions and implement responses to an emergency.
12. Due to the failure to take Well 8 offline and the severity of the threat to public health and welfare, a water supply emergency exists and immediate action is required to protect public health or welfare and Respondent has not taken such action.

IV. ORDERS

1. By May 26, 2016, provide and update the Director, or his designee, of viable contact information for reaching Respondent at all times. The contact shall be an individual with authority to make decisions and implement responses to any emergency.
2. Beginning May 26, 2016, unless another date is agreed to by the Director, do not allow water from Well 8 to be used for human consumption, as defined by OAC 3745-81-01. Water from Well 8 may be used non-potable purposes. Do not begin using Well 8 for human consumption purposes until a method of treatment reduces the total concentration of PFOA and PFOS below the 70 ppt health advisory level in the drinking water at the entry point to the Area A PWS distribution system.
3. By June 2, 2016, submit plans for providing an alternate water supply, other than bottled water, to all consumers served by the Area A PWS. This should include but not be limited to a different well configuration or connecting to the city of Fairborn PWS or other PWS).
4. On June 1, 2016 collect a sample from the entry point to the Area A PWS distribution system and have the sample analyzed to determine compliance with the 70 ppt health advisory level. Provide sampling results to Ohio EPA no later than two business days of receipt by Respondent.
5. Continue to collect samples from the entry point to the Area A PWS distribution system and have the samples analyzed at least once every 30 days. Provide sampling results to Ohio EPA no later than two business days of receipt by Respondent.

6. Beginning June 9, 2016, sample the remaining production wells (Wells 1, 2, 3, and 7) that serve Area A at least once every thirty (30) days to ensure that those wells have not become contaminated with PFOA/PFOS. Provide sampling results to Ohio EPA no later than two business days of receipt by Respondent.

V. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a party to these Orders, for any liability arising from, or related to the operation of Respondent's PWS.

VI. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Respondent.

VII. NOTICE

Except as specifically required by an individual Order, all documents required to be submitted by Respondent pursuant to these Orders shall be addressed to:

Ohio Environmental Protection Agency
Southwest District Office
Division of Drinking and Ground Waters
401 East Fifth Street
Dayton, OH 45402

Attn: Mariano Haensel, Inspector

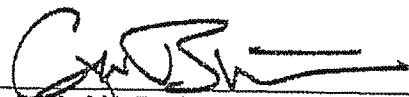
or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

VIII. EFFECTIVE DATE

The effective date of these Orders is the date these Orders are entered into the Ohio EPA Director's Journal. This order will remain in effect for 90 days, unless the director extends the effectiveness of the order for additional periods in accordance with ORC 6109.05(B).

IT IS SO ORDERED:

Ohio Environmental Protection Agency



Craig W. Butler, Director

5/25/16

Date



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

OHIO E.P.A.

AUG 23 2016

ENTERED DIRECTOR'S JOURNAL

Colonel Bradley W. McDonald
Base Commander
88 ABW/CC
Suite 223
5135 Pearson Road
WPAFB, Ohio 45433

RE: WRIGHT PATTERSON AFB AREA A
DFFO
DRINKING WATER PROGRAM
GREENE COUNTY
PWS ID # OH2903412

Issuance Date: August 23, 2016
Effective Date: August 23, 2016

CERTIFIED MAIL

Subject: Ninety (90)-Day Extension to the May 25, 2016 Emergency Orders pursuant to ORC 6109.05(B)

Dear Col. McDonald:

I am writing with regard to the Emergency Orders issued to you on May 25, 2016, which went into effect immediately for a period of ninety (90) days. Since the Emergency Orders were issued, Wright Patterson Air Force Base (WPAFB) has complied with the requirements of the orders. Well 8 has been taken offline, monthly monitoring has been conducted at the active entry points to the Area A distribution system and production wells 1, 2, 3, and 7, and an alternate water supply was provided while the Area A public water system (PWS) exceeded the health advisory level for PFOA/PFOS. WPAFB acknowledged in an August 22, 2016 email that monthly sampling of the Area A PWS would continue.

At this time, PFOA/PFOS is still present in some of the production wells serving the Area A PWS. While none of the production wells are currently above the health advisory level the elevated presence of PFOA/PFOS requires continued monitoring to ensure that drinking water above the health advisory level is not put into distribution. In accordance with Ohio Revised Code Section 6109.05(B), I am extending the effectiveness of the order numbers 2, 5 and 6 from the Emergency Orders for an additional ninety (90) days because the emergency condition identified in the Emergency Orders still exists as of this date. Order numbers 1, 3, and 4 of the Emergency Orders have been completed and, as such, will not be extended.

In accordance with ORC 6109.05(B) and OAC 3745-47-19, you may request a hearing within ten days after receipt of this order. If a hearing is requested in accordance with ORC 6109.05(B) and OAC 3745-47-19, the hearing will be held within forty-eight hours to consider the issues raised by the adjudication hearing request. If necessary to obtain necessary evidence, the hearing examiner may continue the adjudication hearing, but shall reconvene the adjudication hearing as soon as possible and not later than 20 days. At an adjudication hearing you may appear in person, or be represented by your attorney, or by such representative as is permitted to practice before this Agency, or you may present your position, arguments, or contentions in writing. At the hearing you may present evidence and examine witnesses

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appearing against you. The request for a hearing shall be in writing and shall specify the issues of fact and law to be contested. Requests for a hearing shall be submitted in writing to the Hearing Clerk, Ohio EPA, P.O. Box 1049, Columbus, Ohio 43216-1049.

Again, I would like to acknowledge the progress WPAFB and Ohio EPA have made by working together to address the presence of PFOA/PFOS in the Area A PWS. Moving forward, if you would prefer to document the ongoing obligations from this extension of the Emergency Orders in a separate agreement, please contact Colin Bennett with our legal office at (614) 644-2850.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig W. Butler", enclosed in a large, loopy circular flourish.

Craig W. Butler, Director
Ohio Environmental Protection Agency

- cc: Lt. Colonel Polly Sandness, USAF
Colonel Elena Oberg, USAF
Kimberly McSparran, Drinking Water Program Manager, WPAFB
Thomas Menza, Chief – Contracts and Environmental Law, WPAFB
Michael Baker, Chief, DDAGW, Ohio EPA
Todd Anderson, Assistant General Counsel, Ohio EPA
Bonnie Buthker, Chief, SWDO, Ohio EPA
- ec: Justin Burke, Manager, DDAGW-CO, Ohio EPA
Jeff Davidson, Manager, DDAGW-SWDO, Ohio EPA
Jeff Stark, DOCC, DDAGW-SWDO, Ohio EPA
Andrew Barienbrock, Manager, DDAGW-CO, Ohio EPA
Colin Bennett, Senior Staff Attorney, Ohio EPA
Lawrence Helkowski, Attorney General's Office



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

June 2, 2016

Colonel John M. Devillier
Base Commander
88 ABW/CC
Suite 223
5135 Pearson Road
WPAFB, Ohio 45433

RE: Wright-Patterson AFB, Fairborn
Remediation Response
Correspondence
Remedial Response
Montgomery County
529000856001

Subject: Notification for Additional Work Needed– Removal Action for evaluation of plume containing PFAS for plume control and source assessment

Dear Colonel Devillier:

This letter serves to provide notice of the need for a Removal Action under the February 17, 1988 Administrative Orders on Consent (Orders) between the Ohio EPA and the U.S. Air Force for the Wright-Patterson Air Force Base (WPAFB). Ohio EPA has determined that additional work by WPAFB is necessary to achieve the objectives of the Orders, pursuant to Section 5, paragraph E. Specifically, Ohio EPA is directing WPAFB to implement an expedited removal action, as defined by the Orders, to ensure that Perfluoroalkyl substances (PFAS) detected in ground water at WPAFB are prevented from affecting additional WPAFB production wells and downgradient city of Dayton production wells.

On March 18, 2016, WPAFB sampled all Area A water supply wells. PFAS, namely Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA), were detected in ground water sampled from Wells 8 and 9 in excess of the new U.S. EPA health advisory level of 70 parts per trillion (ppt). WPAFB has since taken Wells 8 and 9 out of service until a method of treatment reduces the total PFOA and PFOS concentration below the health advisory level pursuant to emergency orders issued by Ohio EPA on May 25, 2016.

Wells 8 and 9 are located hydraulically upgradient of the city of Dayton's Huffman Dam Well Field. Because PFAS contamination impacting Wells 8 and 9 poses a continued threat to the public health from the potential plume emanation to the city of Dayton wellfield WPAFB must take immediate action to ensure that existing PFAS contamination

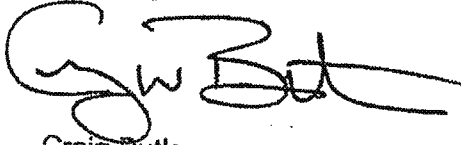
does not affect any remaining WPAFB Area A production wells or Dayton's production wells. The Removal Action must include the following components:

1. WPAFB currently operates an extraction well at the Area C boundary and samples monitoring wells between the boundary and the city of Dayton's production wells at Huffman Dam. By June 9, 2016 WPAFB must sample the extraction well at the Area C boundary and downgradient monitoring wells to determine if PFAS has migrated to this area.
2. If WPAFB detects contamination during the sampling of the base boundary extraction or monitoring wells described in bullet 1 above, then WPAFB must immediately notify OEPA and the city of Dayton to begin sampling their production wells at the Huffman Dam area. This subsequent sampling should be completed within 2 weeks of when the extraction well/monitoring well results are received.
3. If WPAFB detects contamination during the monitoring required in bullet 1, WPAFB must also evaluate what immediate short term actions to implement to prevent existing ground water contamination from impacting either WPAFB's remaining Area A production wells (Wells 1, 2, 3, and 7) or the city of Dayton's wells at Huffman Dam. This should include but not limited to ongoing monitoring and the evaluation of such actions as using existing, non-operable production wells as extraction wells to prevent PFAS contaminants from migrating to water supply wells at either WPAFB or the city of Dayton.
4. If WPAFB detects contamination in the city of Dayton's production wells at Huffman Dam, within 2 weeks of receiving these results, WPAFB must notify Ohio EPA and the city of Dayton and sample additional production wells and the entry point to the city's distribution system to determine the extent of impact to the city of Dayton's water supply. Based on these sampling results, WPAFB must then develop an immediate short term action plan to prevent PFAS contamination from impacting additional production wells and the city of Dayton's public water supply.
5. WPAFB must evaluate the existing monitoring well network. If the existing network is inadequate to detect any PFAS contamination that may be migrating towards either WPAFB's or Dayton's production wells then WPAFB should propose the installation of additional monitoring wells to augment the network.
6. All actions in items 3, 4 and 5 above must be submitted to OEPA within 30 days from receipt of this letter.

Page 3
June 2, 2016
Colonel Devillier

If there are any questions, please contact me at (614) 644-2782.

Sincerely,



Craig Butler
Ohio EPA Director

ec: Elena Oberg, Colonel, Vice Commander, 88th Air Base Wing
Bonnie Buttker, Ohio EPA/SWDO
Cindy Hafner, Legal/CO
Mike Proffitt, DERR/CO
W. Dwayne Gross, Ohio EPA/SWDO, DERR
Robyn Winstead, Ohio EPA, DERR
David Perkins, WPAFB CE
Michael Brady, WPAFB, RPM
David Seely, U.S. EPA, RPM
Sue Kroeger, Ohio EPA-Legal



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

June 20, 2016

Mr. David A. Perkins
Director, 88th Civil Engineer Group
5151 Wright Avenue
Wright-Patterson AFB OH 45433-5209

Dear Mr. Perkins:

The Ohio Environmental Protection Agency's (Ohio EPA) June 2, 2016 letter instructed Wright-Patterson Air Force Base (WPAFB) to submit a work plan to Ohio EPA if contamination was detected in the Huffman Dam monitoring wells or the extraction well, EW-1. In this event, the work plan that WPAFB was required to submit would evaluate what immediate short term actions would need to be implemented to prevent ground water contamination from impacting either the city of Dayton's or WPAFB's production wells. In such an event, this work plan was to be submitted to Ohio EPA within 30 days of receipt of the June 2nd letter, i.e., July 2, 2016.

Additionally, Ohio EPA's June 2nd letter provided that if contamination was not detected in the Huffman Dam monitoring wells or EW-1, then WPAFB would develop and submit to Ohio EPA a work plan which would evaluate the adequacy of the existing monitoring well network. If the existing monitoring well network was not adequate, the work plan would propose additional wells to augment the network. In this event, this work plan was also to be submitted to Ohio EPA by July 2nd.

On June 15, 2016, Ohio EPA, the city of Dayton, and WPAFB met to discuss the locations WPAFB proposed for PFAS sampling outlined in Ohio EPA's June 2, 2016 letter. This meeting was preceded by telephone conversations and e-mail correspondence regarding WPAFB's response to Ohio EPA's June 2, 2016 letter. WPAFB has informed Ohio EPA that the Air Force Civil Engineer Center's (AFCEC) contractor, Aerostar Environmental Services, Inc. (Aerostar), will be mobilizing the week of June 20, 2016 to begin field work for purposes of PFAS sampling. WPAFB has explained that the entire field effort is expected to last three (3) weeks, and Aerostar will begin in the Huffman Dam, Operable Unit (OU) 5 area first. However, WPAFB has also stated that before Aerostar can sample the sixteen (16) monitoring wells in Area A and B (see Table 1), Aerostar will be removing dedicated pumps and will need to re-develop selected wells that have not been sampled for several years.

As Ohio EPA has discussed with WPAFB during our recent telephone conferences, Ohio EPA's contractor, Tetra Technologies, Inc. (TetraTech), will also be collecting samples for PFAS analyses from five (5) city of Dayton Huffman Dam monitoring wells and the intake to the ground water treatment plant beginning on June 20, 2016. The city of Dayton

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will be collecting split samples from their five (5) monitoring wells. Ohio EPA's samples will be analyzed by TestAmerica Laboratories, Inc. (TestAmerica) in Sacramento, California. Ohio EPA anticipates that results of this sampling will be tentatively received in fifteen (15) business days.

During our June 15th meeting, WPAFB also discussed a general schedule for the sampling work, provided some maps and explained it would not receive sampling results from the Huffman Dam monitoring wells to be able to submit a work plan by July 2nd. WPAFB explained that it could not submit a work plan to address immediate short term actions or to determine the adequacy of the monitoring well network until the sample results are known. Ohio EPA has also received WPAFB's June 16, 2016 request to submit the draft work plan 30 days after all of WPAFB's sampling results are received. Ohio EPA understands that sample results are needed to develop a complete work plan for portions of the work ordered in the June 2, 2016 letter and has adjusted some time frames accordingly. However, some of the work is necessary to protect the city of Dayton's wellfield and that work must continue in an expeditious manner.

To help clarify, I have separated the work into two categories, the investigations necessary for Item 5 from the June 2, 2016 letter hereafter the "Investigation" and the work necessary to protect the wellfield, Items 2, 3 and 4, hereafter the "Removal".

Investigation

1. Within seven (7) days of receipt of this letter, WPAFB will provide to Ohio EPA the scope of proposed work being conducted by Aerostar, including their standard operation procedures for PFAS sampling and a detailed schedule for this sampling. WPAFB must provide Ohio EPA sample results as WPAFB receives them from the laboratory.
2. Within thirty (30) days from receipt of Ohio EPA's results from the city of Dayton's monitoring wells at Huffman Dam and the intake from WPAFB's extraction well at the Area C boundary, WPAFB will submit a work plan that addresses Item 5 of Ohio EPA's June 2, 2016 letter. These results are expected to be tentatively received by July 6, 2016.

Removal

1. Within two (2) weeks from receipt of Ohio EPA's results from the city of Dayton's monitoring wells at Huffman Dam and the intake from WPAFB's extraction well at the Area C boundary, if PFAS contamination is detected, WPAFB must notify the city of Dayton and sample their production wells at Huffman Dam. WPAFB must also evaluate what immediate short term actions are necessary and will be implemented to prevent existing ground water contamination from impacting either WPAFB's remaining Area A production wells (Wells 1, 2, 3, and 7) or the city of Dayton's wells at Huffman Dam. This should include, but is not limited to, ongoing monitoring and the evaluation of short term actions such as using existing, non-


operable production wells as extraction wells to prevent PFAS contaminants from migrating to water supply wells at either WPAFB or the city of Dayton.

2. Within two (2) weeks from receipt of WPAFB results from the OU 5 area (depicted in Figure 2-4 of the OU 5 groundwater concentrations of FOCs: April-October 2015) if PFAS contamination is detected, WPAFB must notify the city of Dayton and sample their production wells at Huffman Dam. WPAFB must also evaluate what immediate short term actions are necessary and will be implemented to prevent existing ground water contamination from impacting either WPAFB's remaining Area A production wells (Wells 1, 2, 3, and 7) or the city of Dayton's wells at Huffman Dam. This should include, but is not limited to, ongoing monitoring and the evaluation of short term actions such as using existing, non-operable production wells as extraction wells to prevent PFAS contaminants from migrating to water supply wells at either WPAFB or the city of Dayton.
3. If WPAFB detects contamination in the city of Dayton's production wells at Huffman Dam as referenced in paragraphs in 1 or 2 above, within 2 weeks of receiving these results, WPAFB must notify Ohio EPA and the city of Dayton and sample additional production wells and the entry point to the city's distribution system to determine the extent of impact to the city of Dayton's water supply. Based on these sampling results, WPAFB must then develop an immediate short term action plan to prevent PFAS contamination from impacting additional production wells and the city of Dayton's public water supply.

The activities outlined in this letter and in particular, those under the heading "Removal," are paramount to protecting Dayton's drinking water supply. Ohio EPA has diligently worked with you in an attempt to reach agreement on a reasonable schedule for the work which is also protective of the Dayton drinking water supply. It appears, despite our best efforts, you have not been willing to commit to the removal activities. As you know, Ohio EPA, through its contractor, will be conducting expedited sampling and analysis to evaluate any potential threat to Dayton's drinking water supply. Please be advised, that if in Ohio EPA's opinion a potential threat exists, Ohio EPA will pursue all legal actions available to it to ensure citizens are safe. Legal actions may include, but are not limited to, administrative orders and/or coordination with the Ohio Attorney General to pursue judicial remedies. Any such remedy will include recovery of Ohio EPA's costs.

If there are any questions, please contact Bonnie Buttker at (937) 285-6469.

Sincerely,


Craig W. Butler
Director, Ohio EPA

ec: Elena Oberg, Colonel, Vice Commander, 88th Air Base Wing

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David Perkins, WPAFB, CE
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David Seely, U.S. EPA, RPM
Sue Kroeger, Ohio EPA, Legal

Table 1
Proposed Groundwater Monitoring Locations for
PFOS/PFOA Sampling
Wright-Patterson AFB, Ohio

Number of Wells	Well ID	Area	Rationale for Sampling	Screened Interval (ft bgs)	Comments
Area A					
1	FTA2-MW02B	OU3	FTAs: 2 & 5	20 - 25	Fig 2-2
2	GR-215 (05-DM-1231)	OU3	FTAs: 3 & 4	20 - 25	2-2
3	OU4-MW-03B	OU4	downgradient of Bldgs 60 & 268	57 - 62	2-3
4	OU4-MW-12B	OU4	downgradient of Bldgs 60 & 268	40 - 50	2-3
5	CW05-085	OU5	Sentry wells, west boundary	75 - 85	2-4
6	OU5MCD-MW02	OU5	on MCD property	40 - 50	2-4
7	CW04-80	OU5	Sentry wells, west boundary	50 - 60	2-4
8	CW06-077	OU5	Sentry wells, west boundary	67 - 77	may need to redevelop 2-4
9	NEA-MW27-31	OU10	northeast boundary of base	40.8 - 45.5	2-1
10	OU10-MW-25S	OU10	northeast boundary of base	36 - 46	2-1
11	OU10-MW-18D	OU10	downgradient of Bldg 60	72 - 82	2-1
12	OU10-MW-11S	OU10	near Bldg 268, potential PFC site	53 - 63	2-1
13	GR-333	OU10	downgradient of Bldg 268	25 - 35	2-1
Area B					
14	18-560-M	OU6	Sentry well, west boundary	25 - 35	may need to redevelop 2-10
15	MT-230 (CW03-77)	OU8	Sentry well, north boundary	67 - 77	2-5
16	BSE-P1	OU8	Well along south boundary	28 - 38	2-9

-no cluster any more

NA - Not applicable, well not in LTM Program
Note: all have dedicated pumps that will need to be pulled and the wells purged



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

RECEIVED

19 JUL 2016 AM 10:10

DIRECTOR'S OFFICE

JUL 14 2016

REPLY TO THE ATTENTION OF

WG-15J

Craig Butler
Ohio Environmental Protection Agency
50 West Town Street, Suite 700
Columbus, OH 43216-1049

Dear Mr. Butler:

Thank you for your May 18, 2016 letter to Peter Grevatt of the United States Environmental Protection Agency's Office of Ground Water and Drinking Water regarding the new health advisory for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) and plans for implementing the health advisories at Ohio sites. Your request has been forwarded to EPA Region 5 for response.

EPA has established health advisories for PFOA and PFOS based on the agency's assessment of the latest peer-reviewed science to provide drinking water system operator's, and state, tribal and local authorities who have the primary responsibility for overseeing these systems, with information on the health risk of these chemicals, so they can take the appropriate actions to protect their residents. EPA is committed to supporting states and public water systems as they determine the appropriate steps to reduce exposure to PFOA and PFOS in drinking water. We recommend that water systems quickly undertake additional sampling to assess the level, scope and localized source of contamination to inform the next steps. If follow-up sampling confirms that PFOA and PFOS are present at individual or combined concentrations above the health advisory levels, water systems and public health officials should promptly provide consumers with information about the levels of PFOA and PFOS in their drinking water. Public education should include specific information on the risks to fetuses during pregnancy and breastfed and formula-fed infants from exposure to PFOA and PFOS above the health advisory levels. It should identify options that consumers may consider to reduce risk such as seeking an alternative drinking water source, or in the case of parents of formula-fed infants, using formula that does not require adding water.